A SNAPSHOT OF PRECONCEPTIONAL HEALTH

Thoughts on What We Know, What We Don't . . . And Where We Go From Here

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Objectives:

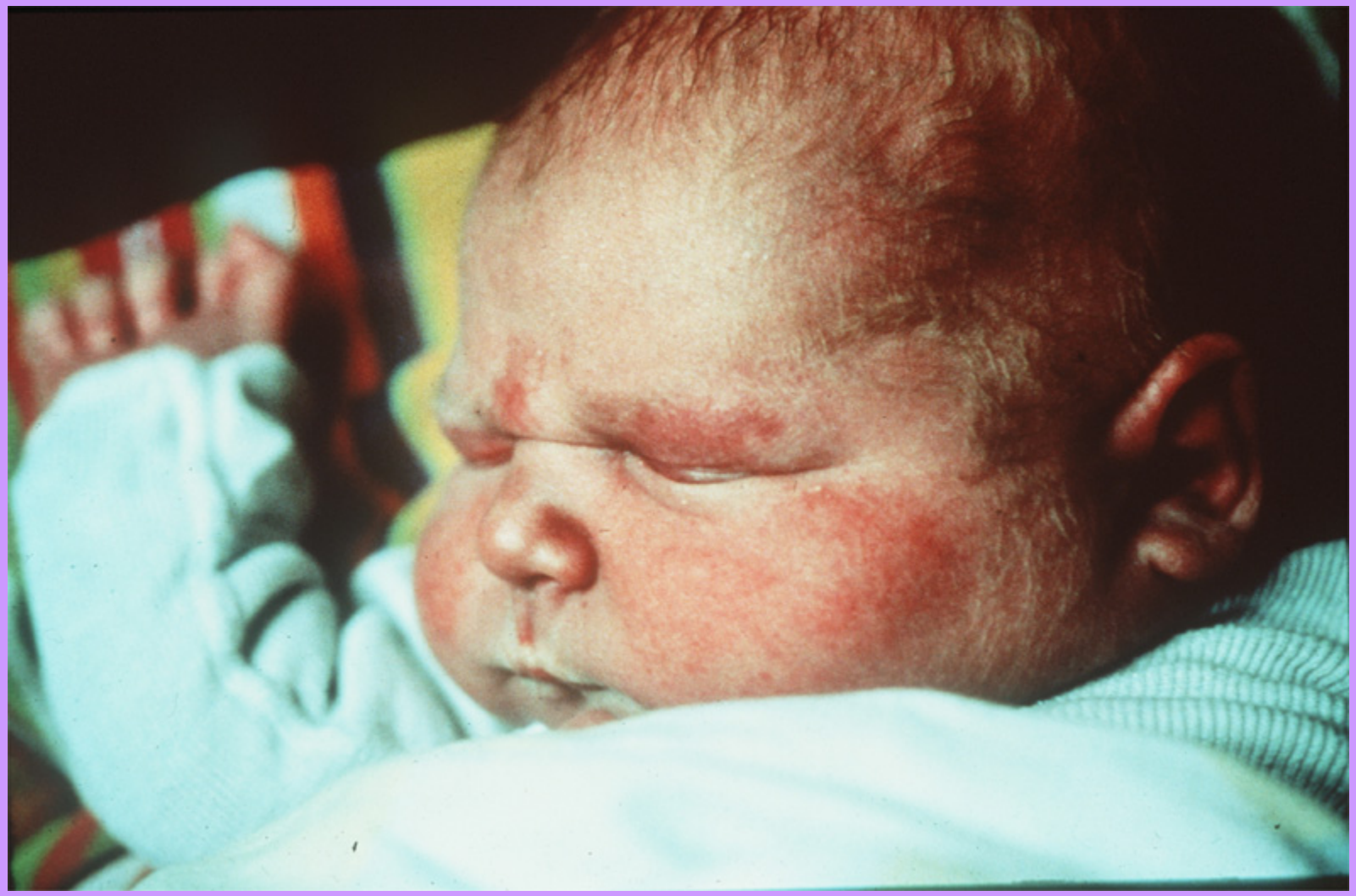
- Reflect on the rationale for the preconceptional health promotion initiative
- Discuss some of the remaining unknowns
- Identify national, state and local strategies for changing the perinatal prevention paradigm
- Explore strategies for incorporating preconceptional health promotion into your own practice

DISCLOSURE STATEMENT

- I have had no financial relationships with commercial interests related to this topic in the last twelve months

Summary

- There is good rationale for the preconceptional health promotion agenda
- Research supports the benefits of preconceptional health promotion; the quality of research spans Levels A to C
- We know relatively little about successful strategies for promoting high levels of preconceptional wellness
- Promoting high levels of health in all women is likely to result in preconceptional health promotion for those who become pregnant



Incidence of Adverse Pregnancy Outcomes, 2002

Spontaneous abortion	20%
Infant Mortality	7.2/1000 live births
Fetal Mortality	5.24/1000 live births plus fetal deaths (2003)
Major birth defects	3.3%
Low Birth Weight	7.3% (2004)
Preterm Delivery	11.8% (2004)
Complications of pregnancy	30.7%
Unintended pregnancies	49%
Unintended births	31%

INTERNATIONAL COMPARISONS OF INFANT MORTALITY RATES,2002

Rank	Country	Rate
1	Hong Kong	2.3
2	Sweden	2.8
10	Czech Republic	4.2
17	Portugal	5.0
27	Cuba	6.5
28	**United States**	**7.0**

http://www.marchofdimes.com/peristats

HEALTHY PEOPLE 2010

- Reduce infant deaths to 4.5 (per 1000 live births) **Kansas 7.2 (2002)**
- Reduce fetal deaths to no more than 4.1 (per 1,000 live births plus fetal deaths) **Kansas 5.24 (2003)**
- Reduce preterm births to no more than 7.6% **Kansas 11.8 (2004)**

Selected Reproductive Outcomes
Kansas and US

• Spontaneous Abortion	20.0%**	(20%)*
• **Fetal Death Rate**	**5.24%*** **	**(6.23%)**
• **Infant Mortality Rate**	**7.2%****	**(7.0%)***
• **Low Birth Weight Rate**	**7.3%*****	**(7.8%)***
• **Preterm Birth Rate**	**11.8%******	**(12.1%)***
• Congenital Anomalies	3-6%**	(3-6%)*

***US Data, 2002**
**** Kansas Data, 2002**
***** Kansas Data, 2003**
****** Kansas Data, 2004**

Source: Peristats (MOD)

In obstetrics. . .

most of our outcomes or their determinants are

already present before we ever

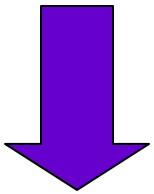
meet our patients

Important Examples

- Intendedness of conception
- Interpregnancy interval
- Spontaneous abortion
- Abnormal placentation
- Chronic disease control
- Congenital anomalies
- Timing of entry into prenatal care

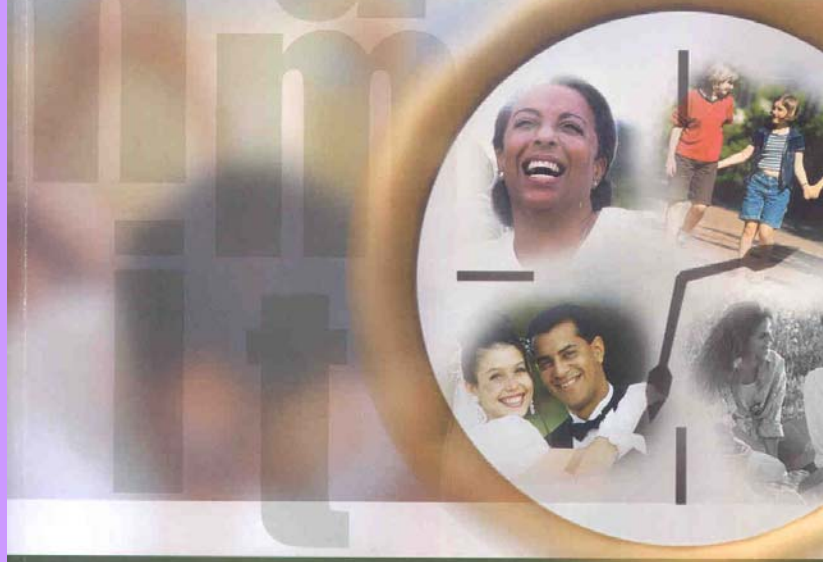
IMPORTANCE OF FIRST TRIMESTER ON PREGNANCY OUTCOMES

Preconceptional Health Promotion



Primary Prevention

National Summit on Preconception C



June 21 - 22, 2005

The Atlanta Marriott Century Center
Atlanta, Georgia

CDC

of Dim

Saving babies, toget

CDC

MMWR™

Morbidity and Mortality Weekly Report

Recommendations and Reports — April 21, 2006 / Vol. 55 / No. RR-6

Recommendations to Improve Preconception Health and Health Care — United States

A Report of the CDC/ATSDR Preconception Care Work Group and the Select Panel on Preconception Care

INSIDE: Continuing Education Examination

DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION

Preconception Care Framework

Preconception Overload

June, 2005

- Medline results for “preconception”—338
- Medline results for “preconceptional” 103
- Goggle hits—630,000

March, 2007

- Medline results for “preconception”—1197
- Medline results for “preconceptional”—419
- Goggle hits—1,430,000

CDC Definition

- Preconception care is a set of interventions that aim to identify and modify biomedical, behavioral and social risks to a woman's health or pregnancy outcome through prevention and management
- It is more than a single visit and less than all well-woman care

CDC and Select Panel, 2006

Common Definitions and Uncommon Usage

- **Preconception**
  - Health status and risks before first pregnancy; health status shortly before any pregnancy
- **Periconception**
  - Immediately before conception through organogenesis
- **Interconception**
  - Period between pregnancies

Foundation for CDC Initiative

Evidence-based clinical guidelines exists for:

- Folic acid
- Rubella seronegativity
- Diabetes
- PKU
- Oral anticoagulants
- Anti-epileptic treatments
- Isotretinoins
- Alcohol use
- STDs
- etc

Goals for Improving Preconception Health

- Goal 1: Improve the knowledge, attitudes and behaviors of mean and women related to preconception health
- Goal 2: Assure that all US women of childbearing age receive preconception care services—screening, health promotion and interventions-that will enable them to enter pregnancy in optimal health
- Goal 3: To reduce risks indicated by a prior adverse pregnancy outcome through interventions in the interconception period
- Goal 4: Reduce disparities in adverse pregnancy outcomes

Examples of what we know. . . and what we don't:*

*Bottom Line: Little has changed in the last 20+ years

What We Know: Diabetes

- Tight control of diabetes in periconception period results in decreased incidence of congenital anomalies

What We Don't Know:

- How to reach all women with diabetes with this prevention opportunity

Process Measures and Diabetes

- Managed Care Study:
  - 52% of women of reproductive age with pregestational diabetes recalled being counseled about blood sugars and conception
  - 37% reported discussion about using contraceptive method until optimal glucose control achieved

Kim, et al AJOG, 199, 227-232, 2005

DIABETIC WOMEN AND PERICONCEPTIONAL BEHAVIOR
N=85 PP Diabetic Women

- Periconceptional behaviors in women with pregestational diabetes
  - 79% knew advantages of optimizing blood sugar
  - 41% had “planned” pregnancies
  - 10.6% had no knowledge of relationship of diabetes in pregnancy
  - Association of provider attitudes on planning status

Holing, et al. Diabetes Care 21: 880-895, 1998

- Prospective study of factors associated with optimal glucose control
  - Women who reported no specific advice prior to gestation
  - Women who had a previous poor pregnancy outcome or complicated pregnancy

Casele & Laifer, Arch Int Med, 158, 1321-1324, 1998

What We Know: Phenylketonuria

- High phenylalanine levels associated with poorer reproductive outcomes—reductions associated with improved outcomes

What We Don't Know:

- How to engage specialists in preconceptional education and interventions; how to engage women in difficult regimen

What We Know: Drug Exposures

- The risks of teratogenic drug exposures can be reduced by periconceptional alterations in drug regimens

What We Don't Know:

- How to reach women with the appropriate warnings
- How to successfully explain risk
- How to prevent unintended pregnancies

What We Know: NTDs

- Folic Acid protects against neural tube defects
- Impact far lower than prevention potential of 50-70% reduction

What We Don't Know:

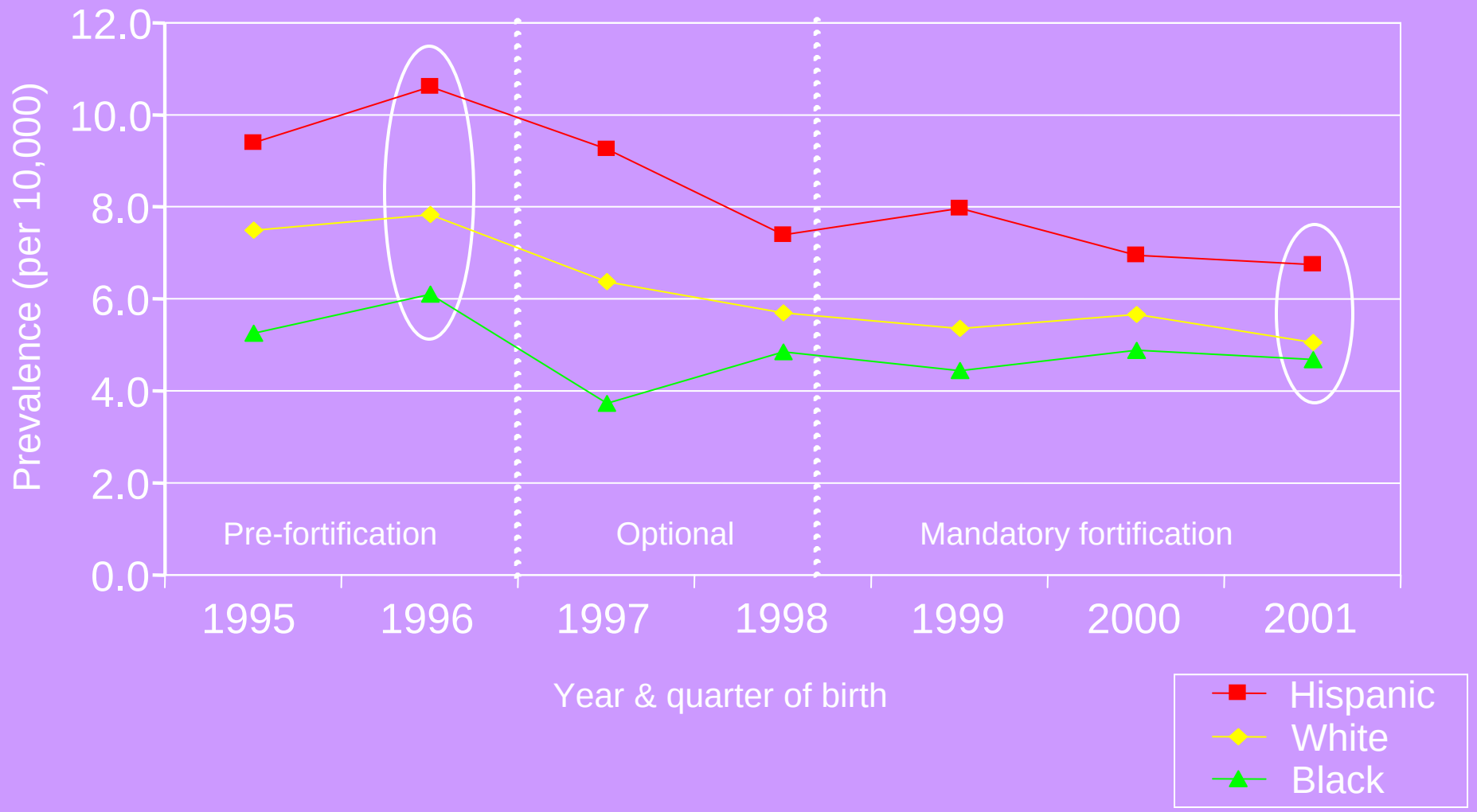
- How to translate what is known into prevention opportunities for individual women
- How to avoid over-promising or instilling guilt
- Whether energy and resources should be directed toward population-based prevention strategies (i.e. fortification) rather than individual behaviors

COMPARISON KNOWLEDGE/USE OF FOLIC ACID TO PREVENT BIRTH DEFECTS—Women of childbearing age

Year	Knowledge about ↓ NTDs	Knowledge take before pregnant	Non-Pregnant women who take
1995	4%	2%	25%
2000	14%	10%	32%
2004	24%	12%	37%
2005	19%	7%	31%

MODs, 1995, 2000,2004, 2005

Impact of Fortification by Race/Ethnicity
Prevalence of Spina Bifida and Anencephaly
NBDPN, 1995 – 2001



What We Know: Intendedness of Conception

- Nearly 50% of pregnancies are unintended

What We Don't Know

- The relationship between pregnancy intention, pregnancy planning and positive periconceptional behaviors
- Whether a health care emphasis on preconception impacts rates of intendedness, planning or positive behaviors

What We Know: Women's Health Status

- Major determinants of poor health status in women are also important risk factors for poor pregnancy outcomes

"As attractive and relatively inexpensive as prenatal care is, a medical model directed at a 6-8 month interval in a woman's life cannot erase the influence of years of social, economic, [physical] and emotional distress and hardship."

Dillard, RG NCMJ 65:3 p147 (2004)

What We Know: Obesity

- Obesity and Women's Health:
  - Diabetes
  - Hypertension
  - Cardiovascular disease
  - Disabilities
- Obesity and Pregnancy:
  - Glucose intolerance of pregnancy
  - Pregnancy induced hypertension
  - Thrombophlebitis
  - Neural tube defects
  - Prematurity

Other Examples

- Alcohol use
- Tobacco use
- Periodontal disease
- Hemoglobinopathies
- Thyroid dysfunctions
- etc

What We Know: Women Are Not Getting Comprehensive Services

Points of Assessment During Routine GYN Care

•Prescription drug use	30%
•Medical history	15%
•OTC drug use	10%
•Domestic violence	10%
•Nutritional assessment	9%
•Dietary supplements	3%

Bernstein, et al. J Repr Med 45, 546-552, 2000

Missed Opportunities May Abound

- 1996 report (Wynn & Yu)
  - 50% of women received preventive services every year
- 2001 report (NCHS)
  - Women ages 15-44 average 3.8 medical visits annually

Missed Opportunities May Abound

- In 2005 KFF report:
  - Just over 50% of women surveyed had talked to a health care professional in the last 3 years about diet, exercise or nutrition
  - Fewer than 50% had talked about calcium intake (43%), smoking (33%) and alcohol (20%)
  - Only 31% of women ages 18-44 had talked with a provider about their sexual history in the preceding three years.

- Only 31% of women ages 18-44 had talked with a provider about their sexual history in the preceding three years.
- Discussion of more specific topics was even more rare:
  - STDs (28%)
  - HIV/AIDS (31%)
  - Emergency contraception (14%)
  - Domestic and dating violence (12%)

Women's Health Status

- **What We Don't Know:**
  - Will framing the preconception movement as a women's health agenda diminish the charges of pronatalism which have surfaced? ("Always almost pregnant"' "Forever Pregnant")
  - Will an emphasis on women's wellness impact unintendedness rates and/or the associated risks?
  - Can we effectively alter lifestyle and other risks prior to conception to positively impact a woman's long term health status as well as risks to pregnancies, should she conceive?
  - How disparities will be affected?

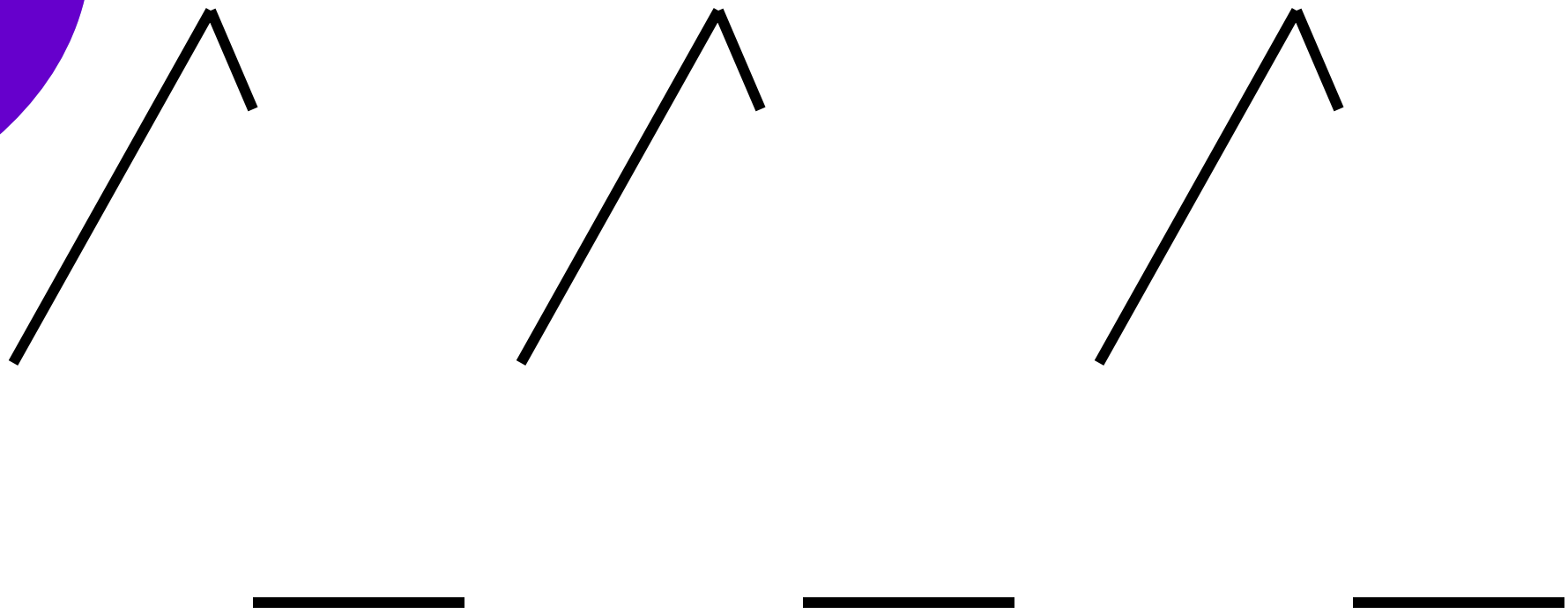
Where Do We Go From Here?

Selected strategies for moving the agenda forward

Dominant Perinatal Prevention Paradigm

- Features categorical focus with little integration with woman's preexisting care or with her future health needs
- Initiated at first prenatal visit with
  - Risk assessment
  - Health promotion and disease prevention education
  - Prescription for prenatal vitamins
- Ends with the postpartum visit

Reproductive Health
“Business As Usual”



Examples of Fragmentation

- Prenatal/Intrapartum/Postpartum record keeping/sharing
- Postpartum visits (in 2003, 80.3% of those with commercial plans and 55.3% of those with Medicaid obtained these visits)
- Follow-up for GIP (in 2005 report only 37% of women underwent testing recommended by ADA in pp period)

An Illustration

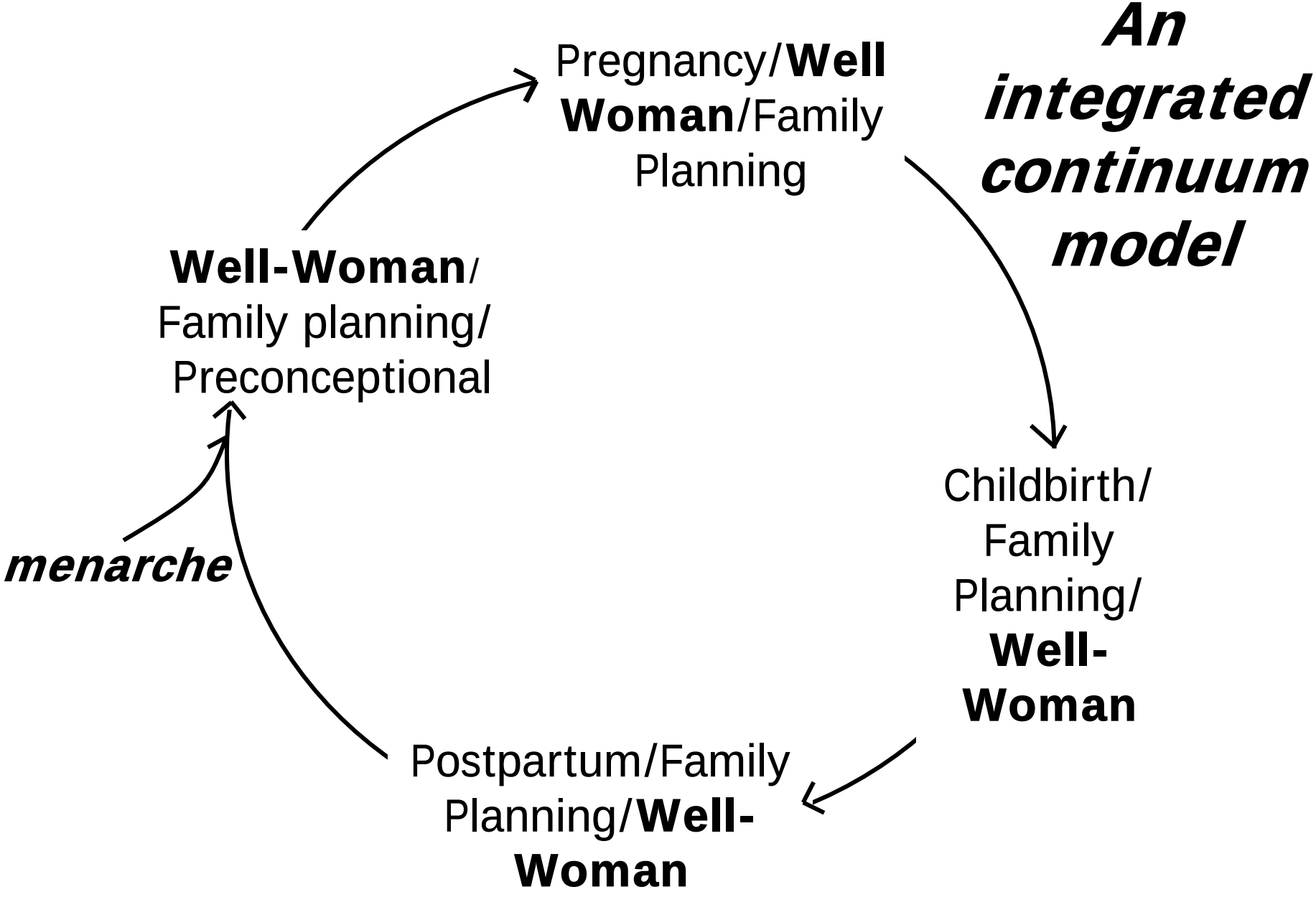
- SW is g1 p1 who had a 1500 gm infant 7 months ago who is presenting for a new ob visit. During her previous pregnancy she was noted to be
  - Underweight (BMI 17.5)
  - Smoker at 1 ppd
  - Experiencing an unintended pregnancy
  - Depressed

As you review her record you note that none of these issues has been revisited since her last delivery—despite a routine postpartum visit

An Integrative Model

- Builds on a continuum
- Emphasis on health promotion throughout the lifespan
- Emphasis on primary and secondary disease prevention
- Emphasis on woman, first, rather than her reproductive status

An integrated continuum model



Promoting Integrated Services

- A meaningful integration or continuum of service must be conceptualized and operationalized to overcome traditional boundaries

Traditional Silos

- Maternity related care
- Family planning services
- Chronic disease care
- Well woman care
- Inpatient/outpatient care
- Specialty services
- Nutrition services

Promoting Integrated Services

- Avoid creating new silos such as promoting another categorical service: “the [routine] preconception visit”

Calling for Three Tier Approach to Achieve the Preconception Agenda

- General Awareness (Social marketing)
- Routine Health Promotion (“Every woman, Every time”)
- Targeted Services (Specialty care)

General Awareness

Issues in General Awareness

- The concept “preconceptional” means nothing to the general public
- Women most in need of preconceptional health promotion are often those least likely to have intended conceptions

Routine Health Promotion

- Promote the “well woman visit” (to replace the “annual visit”)
  - Use the well established and well respected “well child visit” as the model
  - Expectation of well child visit includes extension beyond the traditional medical model, a focus on prevention, an assessment of milestones (e.g. psychological readiness to become pregnant) and anticipatory guidance (on how to best achieve desired goals).
  - Frame screening, counseling and interventions with life course in mind

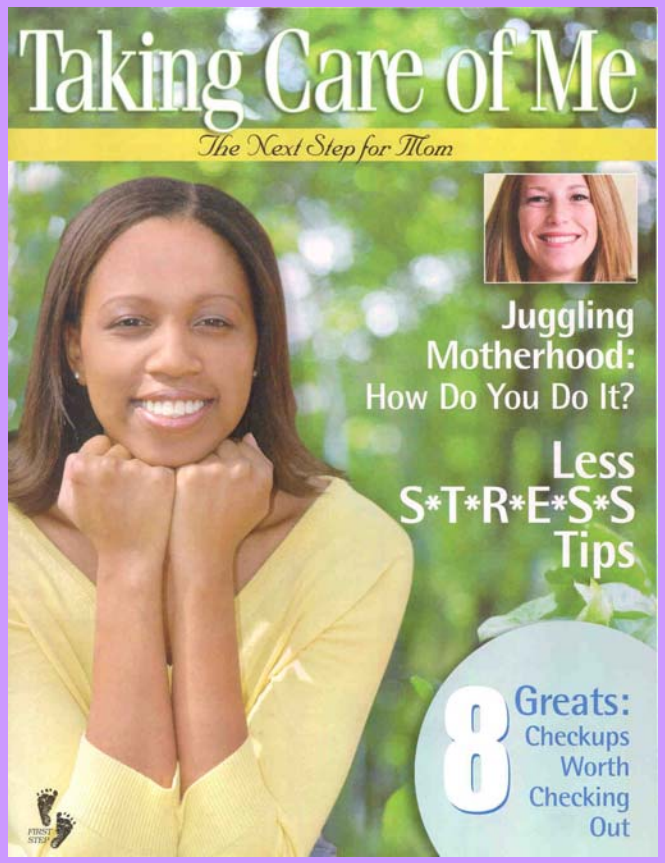
- Does **every** woman (including the 13 year old, the 45 year old and everyone in between) leave your unit/practice with a clear message of the benefits of exogenous folic acid? And a clear message to start taking **NOW**?

What about clear messages on:

- Intentions regarding becoming pregnant
- Nutritional status (are you calculating and explaining BMIs on every woman at every visit—and offering meaningful strategies to impact?)
- Tobacco cessation
- Other substance use and exposures
- Exercise habits
- Calcium intake
- Periodontal disease
- STI Risks

Routine Health Promotion

Reframing Reproductive Health to Women's Health



Take Home Message:

Build basic preconceptional health services around an opportunistic approach: Incorporate wellness emphasis into every family planning, well woman, STI, chronic disease visit to promote women's wellness, intendedness of pregnancy and periconceptional wellbeing for those who become pregnant

Targeted Services

- Case-finding for the woman at risk and appropriate guidance, referral, follow-up
  - Based on health profile
  - Based on previous poor pregnancy outcome
- The biggest short term return on investment will be attending to interconceptional needs of women who have declared their risks

Organization of Services

What We Know:

- We've been doing it the same way for a long, long time
- Our reproductive outcomes fall short of our goals
- Women's health status is often poor
- We are working harder but not smarter

What We Don't Know

- If restructuring our health care approach for women will impact on outcomes for women, pregnancies and infants

Public Policy and Systems Initiatives


Healthy Women
Healthy Mothers
Healthy Communities
Healthy BABIES
INFANT DEATH
IN OUR COMMUNITY

Promote Partnerships

- Cross the silos:
- Authorize WIC to include interconceptional messages in all counseling to postpartum women
- Expand expectations of well baby visits to promote advantages of interconceptional spacing; to promote targeted interconceptional care for mothers of special needs infants
- Engage pharmacists in more active “outreach” to women with known risks for poor pregnancy outcomes

Policy Considerations in Promoting Integrated Services

- Tie reimbursement for well woman exam to demonstrations of health promotion and disease prevention counseling
- Start expectations with federal and state insurance plans
- Build in audit measures to assure progress is being made in meeting benchmarks of “well woman care”
- Close gaps in access: For instance, what is financial access for family planning waiver patients to specialty care?

Promoting Women's Wellness

- Tie reimbursement for well woman exam to demonstrations of health promotion and disease prevention counseling
- Start expectations with federal and state insurance plans
- Build in audit measures to assure progress is being made in meeting benchmarks of "well woman care"

Next Actions on National Level

- Compile and disseminate clinical guidelines
- Develop uniform curriculum for professional education
- Gather and disseminate practice supports (health appraisals, educational materials, etc)

Now, It's Your Turn:

What strategies would you use to "sell" preconceptional health promotion to:

- The population-at-large?
- Providers?
- Insurers?

Summary

- There is good rationale for the preconceptional health promotion agenda
- Research supports the benefits of preconceptional health promotion; the quality of research spans Levels A to C
- We know relatively little about successful strategies for promoting high levels of preconceptional wellness
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